

covery this commission was very glad to welcome him back and secure his valuable services.

Mr. Armstrong, while not a regular employé until September, 1883, had yet served for several seasons in gathering whitefish ova. He had gained the reputation of being one of the most skillful and capable among experts. He was also well known for his industrious habits, honorable dealing, and good judgment. When the increased appropriation, granted by the legislature, made possible extended operations by this commission, Mr. Armstrong was the first man engaged.

They were three manly fellows that any commission might well have been proud of, as we were. They were three fast friends, who were always loyal to each other and themselves, their families, and their friends.

And this minute is the saddest that shall ever be made upon these records.

40.—POACHERS OR DESTRUCTIVE VISITORS OF FISH-PONDS.

By JAMES ANNIN, Jr.

[Abstract, by Chas. W. Smiley, of a paper in the Transactions of the American Fish Cultural Association for 1891.]

I. KINGFISHERS.—The notes of this bird are heard from early spring until cold weather, and even before the spring season is opened, as if impatient for it to come. He is never satisfied, being on the lookout from daylight till dark, and is ever ready for the plunge. He can take as many fish as the average sportsman.

The best way to destroy him is by a small, round, steel trap, the kind without the shank or tail piece. Fasten it to the top of a 10 or 15 foot pole, near a fishing ground, where the bird may think it a splendid spot for observations, and he will drop both feet squarely into the trap. Occasionally it will take hawks and owls, but very few robins or small birds.

II. DUCKS.—The domestic duck is very destructive, not only to fish and fish eggs, but to the food of fish. I have seen the tame duck devour a trout 6 inches long. I have been annoyed by the wild ducks called saw-bills or shell-drakes, and I was not able to exterminate them by shooting. Red flannel flags I found to have the effect of scaring them away.

III. OWLS.—The common hoot or screech owl will cause some trouble. One day I found an owl in a muskrat trap, some 4 inches under water. He was after the fish food of the stream, such as the fresh-water lobster, caddis worm, shrimp, &c. They can be caught in the kingfisher traps.

IV. HERONS.—The blue heron deals death with his long, heavy, sharp bill to everything in the fish line. He poaches mostly in the early morning and after dark, coming into shallow water, even within a rod

of the house. He stands in the water perfectly motionless, and as the fishes approach he strikes them. I have sometimes heard a great flopping and disturbance in the water at night time, and upon going to the place in the morning found heron tracks and a trout from half a pound to one pound in weight with a hole in his back or side into which you could put your finger. I suppose this fish to have been too strong for the heron that had mortally wounded it.

To capture them, set steel traps in shallow water, taking careful precaution to secure them, or the heron will fly away with them. When you find him in the trap quiet him with a long club or a charge of shot, lest the savage bird inflict a bad wound upon you.

V. BITTERN.—These birds are similar to the herons, though smaller, and do some damage. I always shoot them.

VI. MUSKRATS.—This animal feeds upon the caddis worm and other fish food, undermines the banks, and eats off the screen slats. I have seen a peck of empty caddis-worm cases in one pile on the bank at the water's edge, which had been left by the muskrats. These should be trapped in the winter and spring; when their fur will sell readily. I usually sell from \$10 to \$15 worth in a year.

VII. MINKS.—The mink is the greatest of our enemies. If he gets the notion of coming to your ponds he will annihilate the fish before you know it. He usually enters at the same place. Set your trap just under the water where he may slide into it as he is sliding into the pond. I have seen a mink slide down the bank of a stream under the water and come up with a fish time and again, with scarcely a failure. One mink is good for a hundred dollars' worth of fish in a short time.

VIII. SNAKES.—I have seen a 30-inch water-adder catch a 5-ounce trout, and have found three trout at a time in the stomach of the same variety. A gentleman told me this spring that last summer he was passing near a pond which contained brook trout, and he saw a snake glide down the bank into the water, and as the water was clear he watched it. It went into some moss that was on the bottom of the pond. Entering the moss from below, soon he saw its head appear in the top of the bunch of moss, and then, for the first time, noticed a small trout about 4 inches long that was almost over the snake's head. After slowly drawing its head out a little, it made a dart for the fish and caught him; then the snake came out on the bank. The only method I have found for dealing with them is to kill them whenever they come in your path. In the months of May and June they may be found along the banks of streams or ponds sunning themselves, when a charge of No. 6 or 8 shot will put them on the retired list.

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